1.   Apparatus for reducing distortion in a high-resolution switching amplifier

2   of the type wherein multiple references are switched to a load in accordance with an input

signal, comprising:

4   a source of a primary reference signal; and

        circuitry for calibrating a secondary reference signal as a function of the primary

6   reference signal when the input signal is zero.

2.   The apparatus of claim 1, wherein the secondary reference signal

2   approaches the value of the integral of the primary reference at a pulse-width of one.

3.   The apparatus of claim 2, wherein the circuitry includes:

2   a comparator connected across the load; and

an integrator connected to receive the output of the comparator.

4.   The apparatus of claim 3, wherein the circuitry further includes:

2   a pulse-width modulator connected to the output of the integrator.

5.   A method of reducing distortion in a high-resolution switching amplifier

2   of the type wherein primary and secondary references are switched to a load in

accordance with an input signal, the method comprising the steps of:

4   comparing the integral of the primary reference to the integral of the voltage

across the load when the input is zero; and

6   pulse-width modulating the result of the comparison for use as the secondary

reference.

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